AMENDMENTS TO THE CLAIMS

Please amend Claims 2 and 4 and cancel Claims 1, 3, 5, and 6, as shown below. This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS

1. (Canceled).

2. (Currently Amended) A phase error adjustment device configured to connect to an end of a waveguide polarizer and correct phase errors of the waveguide polarizer, the phase error adjustment device comprising an aperture having a height and a width, wherein changes in the dimension of the height or width will change the phase error adjustment quantity, ~~The device as recited in claim 1,~~ wherein the phase error adjustment device comprises a thickness, and wherein changes in the thickness will change the phase error adjustment quantity.

3. (Canceled).

4. (Currently Amended) A phase error adjustment device configured to connect to an end of a waveguide polarizer and correct phase errors of the waveguide polarizer, the phase error adjustment device comprising an aperture having a height and a width, wherein changes in the dimension of the height or width will change the phase error adjustment quantity, ~~The device as recited in claim 1,~~ wherein the waveguide polarizer comprises a square waveguide polarizer.

5. (Canceled).

6. (Canceled).

7. (Original) A device for converting a linearly polarized electromagnetic wave signal into a circularly polarized electromagnetic wave signal which comprises a TE10 mode signal and a TE01 mode signal, both signals having the same signal amplitude and being approximately 90 degrees out of phase, the device comprising:

a waveguide polarizer adapted to convert the linear polarized electromagnetic wave signal into the circularly polarized electromagnetic wave signal; and

a phase error adjustment device connected to an end of the waveguide polarizer, the phase error adjustment device adapted to correct phase errors that may be generated between the TE10 a mode signal and the TE01 mode signal by the waveguide polarizer, the phase error adjustment device comprising an aperture having a height and a width, wherein changes in the dimension of the height or width will change the phase error adjustment quantity of the phase error adjustment device.

8. (Original) The device as recited in claim 7, wherein the phase error adjustment device is adapted to correct phase errors so that the phase between the TE10 mode signal and the TE01 mode signal is approximately 90 degrees.

9. (Original) The device as recited in claim 7, wherein the phase error adjustment device comprises a thickness, and wherein changes in the thickness will change the phase error adjustment quantity.

10. (Original) The device as recited in claim 7, wherein the phase error adjustment device has an outer shape that matches the outer shape of the end of the waveguide polarizer.

11. (Original) The device as recited in claim 7, wherein the waveguide polarizer comprises a square input/output polarizer.

12. (Original) The device as recited in claim 7, wherein the waveguide polarizer comprises an aperture, and wherein the height and the width of the aperture of the phase error adjustment device is different from a height and a width of the waveguide polarizer aperture.

13. (Original) The device as recited in claim 7, wherein the material of the phase error adjustment device comprises the same material as the waveguide polarizer.

14. (Original) In a process for manufacturing a waveguide polarizer adapted to convert a linearly polarized electromagnetic signal into a circularly polarized electromagnetic signal, a method for adapting the waveguide polarizer to correct for manufacturing tolerances in a waveguide polarizer that might cause phase errors in the circularly polarized electromagnetic signals generated by the waveguide polarizer, the method comprising:

measuring phase errors in the circularly polarized signal caused by the waveguide polarizer;

determining aperture dimensions of a phase error adjustment device that will correct the phase errors; and

attaching the phase error adjustment device in cascade with the waveguide polarizer so that the phase errors are corrected, the phase error adjustment device having the aperture dimensions determined in the determining step.

15. (Original) The method as recited in claim 14, wherein a circularly polarized electromagnetic signal comprises a TE10 mode signal and a TE01 mode signal, both signals having the same signal amplitude and being approximately 90 degrees out of phase, and wherein the phase error adjustment device is adapted to correct phase errors so that the phase between the TE10 mode signal and the TE01 mode signal is approximately 90 degrees.

16. (Original) The method as recited in claim 14, wherein the phase error adjustment device comprises a thickness, and wherein the method further comprises determining the thickness of the phase error adjustment device that will correct the phase errors.

17. (Original) The method as recited in claim 14, wherein the phase error adjustment device has an outer shape that matches the outer shape of the end of the waveguide polarizer.

18. (Original) The method as recited in claim 14, wherein the waveguide polarizer comprises a square input/output polarizer.

19. (Original) The method as recited in claim 14, wherein the waveguide polarizer comprises an aperture, and wherein the height and the width of the aperture of the phase error adjustment device is different from a height and a width of the waveguide polarizer aperture.

20. (Original) The method as recited in claim 14, wherein the material of the phase error adjustment device comprises the same material as the waveguide polarizer